REMARKS

Claims 1-6 are pending in this application. No amendment is made in this response. It is believed that this Response is fully responsive to the Office Action dated **December 17, 2004.**

Claims 1-6 are rejected under 35 U.S.C. §103(a) as being obvious over Ebara, T. et al. (JP 2002-355030).

The rejection of claims 1-6 is respectfully traversed.

The present claim 1 recites a process for producing sporangia of *Bacillus popilliae* involving culturing the bacillus in a medium containing an adsorbent and 0.1 to 0.7% of proline, with other limitations on the medium in the dependent claims. The Examiner cites Ebara et al. in paragraph [0001] for the general disclosure of culturing *B. popilliae* (appearing as POPIRIE [sic] in the machine translation). The reference discloses culturing the bacillus in a medium containing an adsorbent to remove glutamic acid (paragraphs [0008], [0014-0017]).

The Examiner cites Ebara et al. for the general disclosure of a nitrogen source other than glutamic acid (paragraph [0019]), and cites the reference as disclosing a concentration of 0.2 to 4.0 mass% of the nitrogen source.

In traversing the rejection, Applicant argues that the medium disclosed in Ebara et al. does **not** meet the limitations of "0.1 to 0.7% by weight of proline" recited in claim 1. Although Ebara et al. discloses less than 5.0 mass%, preferably 0.2 to 4.0 mass%, of a **nitrogen source**, this does not

represent a disclosure of a **proline** concentration, and certainly not of a proline concentration within the claimed range.

The proline concentration inherent in the disclosure in Ebara can be inferred from the data in the reference, taken with data from the present application. Ebara et al. (JP2002-355030) discloses in paragraph [0042] that POLYPEPTONE S and TRYPTON (yeast extract), DIFCO and lactalbumin hydrolyzate can be used in the medium (as nitrogen sources). As noted above, in paragraph [0019], the reference discloses that the desirable concentration of the nitrogen source in the medium is below 5.0 mass %, preferably 0.2 to 4.0 mass %. For example, in paragraph [0050], there appears to be 0.5% peptone and 1.5% yeast extract, for a total of 2.0% nitrogen source.

The specification of the present application provides amino acid analysis data on the amount of proline in each of these nitrogen sources (see Table 4, page 17). For example, POLYPEPTONE S has 0.0% proline, TRYTPON has 0.124%, DIFCO has 0.285%, and lactoalbumin hydrozylate has 0.103%. Therefore, even if a medium having 5.0 wt% (maximum nitrogen source concentration in the reference) of DIFCO (having the highest level of proline of these sources) were used, this would yield a solution proline concentration of 0.0143 wt%, a factor of 7 below the lower limit of 0.1% in claim 1. The Example in paragraph [0050] of Ebara et al. clearly has an even lower proline concentration than that.

That is, the final concentration of proline in the media disclosed by Ebara et al. can be calculated to be less than 0.1 mass %, which is the lower limit of the proline concentration in the present invention. Ebara et al. **does not disclose** the proline limitation of claim 1.

Applicant further submits that there is no **suggestion** in the reference for the proline limitation recited in present claim 1.

Applicant notes that, at the bottom of page 4 of the Office action, referring to the statement, "Therefore, the rate of glutamic acid to all the amino acid in a culture medium has desirable 35-90 mass%" in paragraph [0020] of the reference, the Examiner states: "It has been taken to mean that the above amino acids have a desirable mass of 35-90%". However, Applicant asserts that paragraph [0020] of the reference appears to be stating that **glutamic acid** represents 35 to 95% of the total amino acid. This inherently would put an upper limit of 65% of the total amino acid being the other amino acids, but this does not provide a disclosure of the amount of **proline**. Clearly the actual fraction that is proline would be much less than 65% of the total amino acid. Of the nitrogen sources listed in Table 4 of the present specification, the highest fraction of proline would appear to be found in OXOID, at 0.419/36.668 = 1.14% of total amino acid.

The Examiner also refers to the "isolation mold amino acid" list of 16 amino acids including proline, in paragraph [0021] of the reference. However, this paragraph does not disclose the relative amount of proline in this mixture, nor the concentrations of the amino acids in the medium, and Applicant submits there is no suggestion here for the "0.1 to 0.7% by weight of proline", recited in claim 1.

Moreover, although the reference discusses the effect of the nitrogen source concentration on growth of the bacillus (paragraph [0019]), there is clearly no suggestion in the reference that the **proline** concentration would have any particular effect, nor any motivation to in any way modify the

concentration of proline.

Applicant therefore submits that claims 1-6 are not anticipated by, and are non-obvious over, Ebara et al. (JP 2002-355030).

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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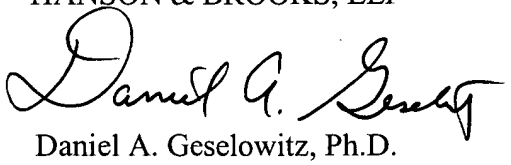

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